

Product Information

Polyethylene Terephthalate Polyester Laminating Resin

TYPICAL CAST MECHANICAL PROPERTIES* see back page (1)

Test	Units of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	11,600/80	ASTM D 638
Tensile Modulus	psi/GPa	580,000/4.0	ASTM D 638
Tensile Elongation	%	2.5	ASTM D 638
Flexural Strength	psi/MPa	16,000/111	ASTM D 790
Flexural Modulus	psi/GPa	620,000/4.3	ASTM D 790
Heat Distortion Temperature	°F/°C @264 psi	158/70	ASTM D 648

*Typical properties are not to be construed as specifications.

TYPICAL LIQUID PROPERTIES FILLED 54% at 32.2°C* see back page (2)

Test	Units of Measure	Nominal
Viscosity, Brookfield RV #3 @20 rpm	cps	1550
Thix Index, 2/20	-	5.0
Styrene Content	%	38
Gel Time, 100g, 1.5% HiPoint 90	minutes	23.0
Gel to Peak	minutes	14.0
Peak Temperature	°C	110

* Filled @ 54%: 51% PMC-SP and 3% TiO₂

Note: For hot tub or spa fabrications, AOC recommends our H100-A is used as a barrier coat or in thin laminate construction directly behind the acrylic for improved physical properties and added protection against osmosis.

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Proven Performance
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DESCRIPTION

Eco-Tek® C431-DKAG-23 is a pre-promoted thixotropic Polyethylene Terephthalate modified laminating resin.

FEATURES

The combined renewable bio-derived content and/or recycled content of C431-DKAG-23 is 25%.

APPLICATION

C431-DKAG-23 is designed to be used with filler in acrylic bonding applications.

BENEFITS

- **Superior Processing**
C431-DKAG-23 was designed for quick wet out/roll out properties.
- Low Styrene content
- Excellent adhesive to acrylic

EcoTek® C431-DKAG-23 Polyester Resin



PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 1.0%-2.0% (1.25% minimum with mechanical application) of the total resin weight.

B. Maintaining shop temperatures between 65°F/18°C and 90°F/32°C and humidity between 40% and 90% will help the fabricator make a high quality part. Consistent shop conditions contribute to consistent gel times.

STORAGE STABILITY

This product is stable for three months from the date of manufacture when stored in the original containers, away from direct sunlight at no more than 70°F/21°C.

During the hot summer months, no more than two months stability at 86°F/30°C should be anticipated.

After extended storage, some drift may occur in gel time.

Storage in plastic totes made out of materials such as polyethylene (PE) or polypropylene (PP), in particular translucent PE/PP, will accelerate gel formation and result in a significantly reduced storage stability.

Storage of this resin outdoors in translucent plastic totes may reduce the storage stability to only a few weeks. AOC cannot assume responsibility for gel formation under these storage conditions.

SAFETY

See appropriate Material Safety Data Sheet for guidelines.

APPLICATION GUIDELINES

Although the Eco-Tek® C431-DKAG-23 provides excellent secondary bonding, exposing the laminate to extreme conditions such as direct sunlight, high temperatures, or dusty conditions for a long time period can reduce secondary bonding. Under these conditions it may be necessary to abrade the laminate to insure the maximum secondary bonding.

Caution:

The ability of an unsaturated polyester resin to bond to acrylic is influenced by many factors. Resin is only one of these factors. The type and amount of filler used, type and color of acrylic used, and the conditions during the thermoforming process are but a few of the factors that effect the ability of the resin to bond to the acrylic. Therefore, it is vitally important that the fabricators evaluate for themselves the fitness of this product for their process.

To insure high quality fabricated parts, AOC strongly encourages fabricators to utilize "Best Practices Guidelines" for polyester resin, ABS and acrylic sheet.

ISO 9001:2008 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2008 standards. This certification recognizes that each AOC facility has an internationally accepted model in place for managing and assuring quality. We follow the practices set forth in this model to add value to the resins we make for our customers.

FOOTNOTES

(1)

Based on tests run at 77°F/25°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. Thixotropic components, if applicable, are excluded from casting samples. Castings were post cured.

(2)

The gel times shown are typical but may be affected by catalyst, promoter and inhibitor concentrations and resin, mold and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and fillers can retard or accelerate gelation. It is recommended that the fabricator check the gelling characteristics of a small quantity of resin under actual operating conditions prior to use.



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The information contained in this data sheet is based on laboratory data and field experience. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any liability for occurrences arising out of its use. The user, by accepting the products described herein, agrees to be responsible for thoroughly testing each such product before committing to production.

Our recommendations should not be taken as inducements to infringe any patent or violate any law, safety code or insurance regulation.